

**PATENT COOPERATION TREATY**  
**PCT**  
**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**  
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P30316A/RPA	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP 03/08115	International filing date (day/month/year) 24.07.2003	Priority date (day/month/year) 26.07.2002
International Patent Classification (IPC) or both national classification and IPC F16L7/02		
Applicant COFLEXIP SA et al.		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets.</p>
<p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> <li>I <input checked="" type="checkbox"/> Basis of the opinion</li> <li>II <input type="checkbox"/> Priority</li> <li>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</li> <li>IV <input checked="" type="checkbox"/> Lack of unity of invention</li> <li>V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</li> <li>VI <input type="checkbox"/> Certain documents cited</li> <li>VII <input type="checkbox"/> Certain defects in the international application</li> <li>VIII <input type="checkbox"/> Certain observations on the international application</li> </ul>

Date of submission of the demand 11.02.2004	Date of completion of this report 30.09.2004
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Vecchio, G Telephone No. +49 89 2399-7325



INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT

International application No. PCT/EP 03/08115

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, Pages**

1-16 as originally filed

**Claims, Numbers**

1-18 as originally filed

**Drawings, Sheets**

1/5-5/5 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: . , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
- the claims, Nos.:
- the drawings, sheets:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/EP 03/08115

5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).  
*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*
6. Additional observations, if necessary:

**IV. Lack of unity of invention**

1. In response to the invitation to restrict or pay additional fees, the applicant has:
  - restricted the claims.
  - paid additional fees.
  - paid additional fees under protest.
  - neither restricted nor paid additional fees.
2.  This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is
  - complied with.
  - not complied with for the following reasons:  
**see separate sheet**
4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:
  - all parts.
  - the parts relating to claims Nos. .

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	4-12,16,18
	No: Claims	1-3,13-15,17
Inventive step (IS)	Yes: Claims	4-12,16,18
	No: Claims	1-3,13-15,17
Industrial applicability (IA)	Yes: Claims	1-18
	No: Claims	

2. Citations and explanations

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/EP 03/08115

**see separate sheet**

**Re Item IV**

**Lack of unity of invention**

The subject-matter of claim 18 is directed to a valve which is merely suitable for use in the seal assembly previously claimed. Thus, according to PCT Guidelines III-4.8 this subject-matter is not unitary with the subject-matter as defined by claims 1-17, which define a seal assembly.

Therefore, the application does not fulfil the requirements of Rules 13.1 and 13.2 PCT.

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Claim 1 does not meet the requirements of Article 6 PCT in that the matter for which protection is sought is not clearly defined. The claim attempts to define the subject-matter in terms of the result to be achieved which merely amounts to a statement of the underlying problem. The technical features necessary for achieving this result should be added.
2. It is also stressed that only in claim 17 the inner and outer pipes are actually claimed. Hence any seal assembly which is suitable for (see PCT Guidelines III-4.8) sealing an annular space between an inner and an outer pipe in a double-walled subsea pipeline can fall within the scope of the claims 1-16 regardless of the features of the pipes as disclosed in the prior art.
3. Concerning the assessments of novelty and inventive step with regard to the claimed subject matter, it is observed that the article of the Oil and Gas Journal cited in the international search report (document XP-001112016) discloses a seal assembly as defined by claims 1-3, 13-15 and 17 as it clearly derives from the paragraph "water-stops", on page 50 onwards, and from figure 10.

In fact, in the paragraph on the last column of page 50, it is stated that "the seal [i.e. the seal as physical entity] is not energized until required [i.e., as described in the first lines of said paragraph on page 10, "until the annulus becomes flooded"], ensuring that the seal [the physical entity] exists [is there, is already placed in the annulus] in an unstressed state [in a non-energised / non-sealing state, thereby allowing passage of gas] until activated by a flooded annulus."

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP 03/08115

Thus, the subject-matter of claims 1-3, 13-15 and 17 does not meet the criteria of Article 33(2) PCT.

4. Turning to document GB-A-2 317 934, due to the present formulation of claim 1 (see point 1 above), the seal "is [mechanically] actuatable from a non-sealing position to a sealing position in response [when] to entry of liquid into said annular space".

Hence, also said GB document can be seen as novelty destroying for the subject-matter of claim 1 (Article 33(2) PCT).

5. The subject-matter of claims 4-12, 16 and 18 is neither known from nor rendered obvious by the available prior art.  
Hence, the subject-matter of said claims fulfils the requirements of Article 33(2) and (3) EPC.
6. The industrial applicability of the claimed subject-matter is clearly given in the description pursuant to Article 33(4) PCT.
7. The claims do not comprise reference signs and are not formulated in the two-part form contrary to Rule 6.2(b) and 6.3(a) PCT.
8. Moreover, contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the above cited Oil & Gas Journal article is not mentioned in the description, nor is this document identified therein.
9. Figures 2a and 2b do not fulfil the requirements of Rule 11.13 (a) PCT.